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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/657,953	09/09/2003	Hamid Ould-Brahim	42871-0007	3046
23577	7590	10/17/2007	EXAMINER	
RIDOUT & MAYBEE SUITE 2400 ONE QUEEN STREET EAST TORONTO, ON M5C3B1 CANADA			RUSSELL, WANDA Z	
			ART UNIT	PAPER NUMBER
			2616	
			MAIL DATE	DELIVERY MODE
			10/17/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

### Application No.

10/657,953

### Applicant(s)

OULD-BRAHIM, HAMID

### Examiner

Wanda Z. Russell

### Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 September 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 1-8** are rejected under 35 U.S.C. 103(a) as being unpatentable over Ould-Brahim et al. (BGP/GMPLS Optical VPNs, hereafter Ould-Brahim 1) further in view of Ould-Brahim et al. (GVPN: Generalized Provider-provisioned Port-based VPNs using BGP and GMPLS, hereafter Ould-Brahim 2).

For **claim 1**, Ould-Brahim 1 disclose a network (Fig. 2) for providing multi-service generalized Layer-2 Virtual Private Network (VPN) services (Title), said network comprising:

a set of elements interconnected by services (Fig. 2, a set of elements containing customer edge routers (CE) and provider edge routers (PE));

at least one first subset of said elements defining a private network (Fig. 2, subset CEs defining virtual private networks such as VPN-A);

at least one second subset of elements different from said first subset defining a provider network wherein at least two subgroups of said first subset of elements may be connected via said provider network (Fig. 2, and P. 4, par. 7, subset PEs is a provider network, two subgroups such as the CE1 and the CE2 that are in the same VPN-A are connected together through the PE provider network);

a provisioning mechanism used to define element membership in said first subset of elements (Abstract, single end provisioning, adding a new port to a given VPN only involves changes on the devices connected to that port, P. 3 par. 7 and 8, a pair of CE's could be connected through the service provider, provisioning changes such as adding a new port to a given VPN (or a new member) only affect the PE and the new added CE that is connected to the PE through that port, section 3, par. 1 and 3, each CE has a unique customer port identifier (CPI) within a VPN, defining its membership within the provider network); and

a signaling mechanism used to create generalized pseudo-wire connectivity between elements within said first subset of elements, said connectivity created across said second subset of elements (P. 7 par. 6, GMPLS signaling to create connection between client devices that are connected to the customer edge routers).

However Ould-Brahim 1 does not explicitly disclose generalized Layer 2 VPN, and said connectivity at a layer selected from one or both of the group consisting of Layer-2 and Layer-1.

Ould-Brahim 2 disclose a generalized (Title) Layer 2 VPN (P. 14, par. 2, line 3), and said generalized pseudo-wire connectivity (Virtual Routers, P. 14, par. 2. Virtual Routers include generalized pseudo-wire) at a layer selected from one or both of the group consisting of Layer-2 and Layer-1 (P. 14, par. 2).

Therefore, it would have been obvious for one skilled in the art at the time of the invention to combine the teachings of Ould-Brahim 1 and Ould-Brahim 2 so that the

service is generalized as the interfaces on the customer's ports and provider ports could be any of the interfaces supported by generalized MPLS (GMPLS).

For **claim 2**, Ould-Brahim 1 and Ould-Brahim 2 disclose everything claimed as applied above (see claim 1). In addition, Ould-Brahim 2 disclose a network for providing multi-service generalized Layer-2 VPN services as claimed in claim 1, said network further comprising:

- a network discovery mechanism used to propagate membership information regarding elements which are members of said first subset (P. 7, 2<sup>nd</sup> par. from the bottom, line 2, and last par. of P. 7 – first par. of P. 8); and

- a service discovery mechanism used to propagate services information regarding services interconnecting elements in said first subset with elements in said second subset (P. 7, 2<sup>nd</sup> par. from the bottom, line 2, and last par. of P. 7 – first par. of P. 8).

For **claim 3**, Ould-Brahim 1 and Ould-Brahim 2 disclose everything claimed as applied above (see claim 1). In addition, Ould-Brahim 1 disclose a network for providing multi-service generalized Layer-2 VPN services as claimed in claim 1, said signaling mechanism having:

- a manager mechanism having a first portion (tariff structure, P. 4, last par. line 4) used to effect connection admission control and a second portion (alternative tariffs, P. 4, last par. line 5) used to select encapsulation in response to a connection request (P. 4, last par.- P. 5, first par.); and

- a multi-service tunnel selector mechanism used to create connectivity across the provider network (P. 4, par. 3, line 5, and lines 4-7).

For **claim 4**, Ould-Brahim 1 and Ould-Brahim 2 disclose everything claimed as applied above (see claim 1 and 3). In addition, Ould-Brahim 1 disclose a network for providing multi-service generalized Layer-2 VPN services as claimed in claim 3, said network further comprising:

a generalized single-sided signaling mechanism used to initiate said connection request triggered by an element of said first subset (P. 4, 2<sup>nd</sup> par. from the bottom, last 2 lines, and P. 8, par. 6, line 3, and lines 1-5).

For **claim 9**, Ould-Brahim 1 and Ould-Brahim 2 disclose everything claimed as applied above (see claim 1). In addition, Ould-Brahim 1 disclose a network for providing multi-service generalized Layer-2 VPN services as claimed in claim 1 wherein said provider network is a non-Multi-Protocol Label Switched provider network (BGP route- Fig. 2, BGP route is Border Gateway Protocol that is non- Multi-Protocol Label Switched provider network).

For **claim 10**, Ould-Brahim 1 and Ould-Brahim 2 disclose everything claimed as applied above (see claim 1). However Ould-Brahim 1 does not explicitly disclose a network for providing multi-service generalized Layer-2 VPN services as claimed in claim 1 wherein said generalized pseudo-wire connectivity uses layer-2 pseudo-wires.

Ould-Brahim 2 disclose a network for providing multi-service generalized Layer-2 VPN services as claimed in claim 1 wherein said generalized pseudo-wire connectivity uses layer-2 pseudo-wires (P. 14, par. 2, line 3 & lines 1-end).

Therefore, it would have been obvious for one skilled in the art at the time of the invention to combine the teachings of Ould-Brahim 1 and Ould-Brahim 2 to offer layer 2 VPNs to other devices.

For **claim 11**, Ould-Brahim 1 and Ould-Brahim 2 disclose everything claimed as applied above (see claim 1). In addition, Ould-Brahim 1 disclose a network for providing multi-service generalized Layer-2 VPN services as claimed in claim 1 wherein said generalized pseudo-wire connectivity uses layer-1 connections (Ethernet switch, P. 2, par. 6, last line. It is obvious that the Ethernet switch uses layer-1 connections).

For **claims 5-8, and 12**, they are method claims corresponding to claim 1-4, and 9 respectively. Therefore they are rejected for the same reason above.

#### ***Response to Amendment***

3. Applicant's amendment filed September 17, 2007 has been received and considered. Claims 1-8 are amended, and claims 9-12 are added.

#### ***Response to Arguments***

4. Applicant's arguments filed September 17, 2007 have been fully considered but they are not persuasive.

5. Applicant argues that neither Ould-Brahim 1, nor Ould-Brahim 2, nor a combination of both disclose the amended claim 1.

In response, the Examiner respectfully disagrees.

Ould-Brahim 2 disclose a generalized (Title) Layer 2 VPN (P. 14, par. 2, line 3), and said generalized pseudo-wire connectivity (Virtual Routers, P. 14, par. 2. Virtual Routers include generalized pseudo-wire) at a layer selected from one or both of the

group consisting of Layer-2 and Layer-1 (P. 14, par. 2). Therefore the 103 rejection is still valid.

See rejection above for more details.

***Conclusion***

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

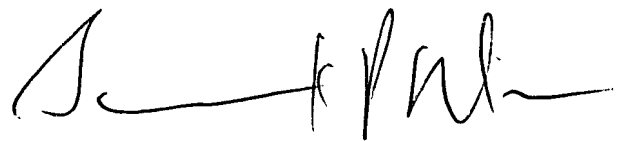
7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wanda Z. Russell whose telephone number is (571) 270-1796. The examiner can normally be reached on Monday-Thursday 9:00-6:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on (571) 272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

WZR



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